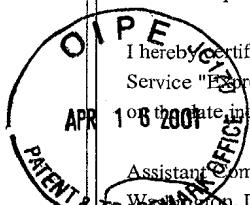


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Chee, M.

Application No.: 09/381,480

Filed: September 16, 1999

For: ITERATIVE RESEQUENCING

Examiner: Chakrabarti, A.

Art Unit: 1655

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced application, please consider the following remarks.

Applicants thank the Examiner for granting a telephone interview with the undersigned on April 2, 2001. At the interview, distinctions between the present claims and the cited Cook reference were discussed. The present claims are directed to a reiterative method of estimating and reestimating a target sequence that is a variant of a known reference sequence. By contrast, Cook is directed to a method of producing oligonucleotides that bind to a known target sequence for use, e.g., as antisense oligonucleotides. The Examiner acknowledged that Cook's target sequence was known in advance. However, the Examiner said the present claim might not be distinguished over Cook in that the present claims did not specify that the variant being analyzed was unknown to the experimentor in advance. The Examiner is respectfully requested to reconsider.

The present claims require steps of estimating and reestimating the sequence of a target nucleic acid molecule from a hybridization pattern of oligonucleotides. It is inherent in such methods that the target sequence cannot be completely known to the experimenter before

performing the experiment because one cannot estimate a sequence, much less reestimate a sequence that one already knows.

Viewed in another manner, the Cook reference, which starts with a known target sequence, cannot reasonably be construed as disclosing estimation or reestimation of a target sequence. The target sequence in Cook is known at the beginning of the method, and remains the same and still known at each step of the method. The pattern of oligonucleotide hybridization to the target sequence is not used to estimate the sequence of Cook's target, this being already known, but rather allows one to identify a "winner" oligonucleotide that shows the best binding to the target (Cook, col. 26, line 23). Nowhere does Cook indicate that the identity of the winner oligonucleotide is or could be used to provide an estimate of his target sequence, much less how this could be done. As noted previously, such would have been a logical impossibility, because Cook's target sequence was known to Cook at all times during performance of his method.

If the Examiner disagrees and maintains that Cook discloses estimating or reestimating a target sequence, the Examiner is asked to state with precision the column and line number in Cook on which he is relying. However, for the reasons given above, as well as the reasons given in the amendment after final submitted March 8, 2001, it is submitted that the rejection should be withdrawn.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Joe Liebeschuetz
Reg. No. 37,505

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